

ABSTRACT OF THE DISCLOSURE

In a telecommunications system that employs frequency hopping techniques, network performance can be significantly improved by taking into consideration the level of interaction (e.g., the collision rate) between frequency hopping sequences, when allocating the frequency hopping sequences throughout the network. In a cellular network, this may be accomplished by deriving a network performance measure as a function of a current allocation of frequency hopping sequences for a number of cells and as a function of an expected collision rate (between the frequency hopping sequences) that appear for the current allocation. The frequency hopping sequences are then re-allocated amongst one or more cells until network performance is optimized. The allocation of frequency hopping sequences that results in optimized network performance may then be used for assigning frequency hopping sequences to new or existing connections (e.g., cellular calls) within a corresponding cell.